From The Assistant Commissioner...

- **Focus on Air Toxics**

The close of the 2001 ozone season brought good news to Indiana citizens about their air quality. For the first time since IDEM began monitoring the air for ozone, all areas of the state met the one hour ozone health standard. U.S. EPA recognized the progress in Clark and Floyd counties last fall by formally redesignating them to "in attainment." And in Lake and Porter Counties, which as part of the Chicago/Northwest Indiana nonattainment area were not required (or expected) to meet the standard before 2007, proactive programs to reduce emissions from businesses and motor vehicles have resulted in healthy air ahead of schedule. Further reductions in ozone levels are expected in the next few years, as electric utilities and other industries make major reductions in emissions of nitrogen oxides by the 2004 deadline.

Since the 1970s and even earlier, we have focused on a sextet of pollutants known as "criteria" pollutants: sulfur dioxide, carbon monoxide, lead, particulate matter, nitrogen dioxide and ozone. State and federal governments, business, the motor vehicle manufacturing industry and citizens have worked together over the last three decades to address each one of these. With the prohibition on leaded gasoline, lead levels plummeted. With the acid rain provisions added to the Clean Air Act in 1990 and the scrubbers and other pollution control technology added to electric utilities, levels of sulfur dioxide decreased to well within health levels, also reducing the harmful effects of acid rain. Particulate matter has been reduced through a host of what are now standard pollution control requirements for industry. Carbon monoxide levels on our city streets are far below levels of health concern due largely to improvements in motor vehicle exhaust systems. Air quality across Indiana now monitors attainment with the health standards for all of these pollutants.

Although our progress has been substantial, ozone and fine particles remain a health concern, as reflected by U.S. EPA's recent review and revision of both standards. IDEM is working with U.S. EPA and neighboring states on the initial work to assess our air quality for compliance with those revised standards and to develop the tools needed (monitors, inventories and models, for example) to plan for attainment. Articles in future *Clean Air Bulletins* will highlight some of those efforts.

In addition to the original six pollutants, many other chemicals are emitted into our air everyday by mobile sources, industries, small businesses, and people going about their everyday lives. In 1990, Congress listed 189 of these that were considered most harmful to human health and designed a program to reduce their emissions, first through requiring businesses to use the most effective control technology available and second through something known as the residual risk program, where the risk to public health remaining after the implementation of technically feasible controls is evaluated and further reductions required if necessary.

Work in the Office of Air Quality has reflected this progression towards increased attention on toxic air pollutants. The Indiana Air Pollution Control Board has adopted

federal technology based rules for numerous types of industries over the past 5 years, and will continue those rulemakings to incorporate future requirements. IDEM's air inspectors work with hundreds of facilities subject to these rules, to make sure that they are in compliance with new requirements. They and compliance assistance staff also work with companies to find alternative materials or processes that will reduce emissions of air toxics by preventing the pollution in the first place. New sources of air toxics go through technology and, in some cases, air quality analysis as part of the air construction permit review process. IDEM maintains air toxics monitors in four Indiana urban areas that monitor for organic toxics and is broadening its abilities at the Indianapolis "supersite" to collect data on toxic metals and aldehydes as well. The information collected by these monitors is posted regularly to IDEM's website, where it can be viewed by the public. There is currently very constructive public discussion occurring on IDEM's proposal to include reporting of selected air toxics in Indiana's emissions reporting rule.

Identifying, and then addressing, the health risk posed by emissions of air toxics is a formidable challenge for us all. The impact of toxics on human health is very complicated and less well understood than the six criteria pollutants. In some cases, health effects do not appear for many years after exposure, or can be complicated by the synergistic effects of exposure to multiple pollutants. With diseases like cancer, there are many factors beyond exposure to air toxics that contribute to an individual's risk. For most of the chemicals, no ambient air "safe" standard has been set, which means that there is no yardstick for regulators, business and the public to use to know how well we are doing.

IDEM is committed to learning as much as possible about the levels of toxics in our air, how much is emitted by mobile sources, industries, small businesses and other activities, the health risks these chemicals pose individually or in combination, and technologies that are available to reduce those risks. We welcome your participation in this important effort to improve air quality and health for all Hoosiers.